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Claim Amendments:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-25 (Canceled)

26. (Currently Amended) A process for continuous deposition of a coating of an HTS tape, comprising:

loading a substrate into a deposition chamber;

translating the substrate through the deposition chamber along a first surface of a substrate block, the substrate block having a gas inlet for feeding gas into a manifold, the manifold distributing gas flow to a plurality of gas channels extending through the substrate block along a portion thereof, the gas channels having a length, being hollow and open along an entirety of said length, extending to the first surface of the substrate block, and terminating at the first surface as respective openings at positions spaced apart from each other along the first surface, the substrate block further having an internal coolant channel;

injecting gas from the inlet, through the manifold, and through the plurality of gas channels of the substrate block and onto the substrate; and

depositing a coating material on the substrate as the substrate translates along the substrate block to thereby form the coating, the coating being a buffer layer over which an HTS layer is formed.

Claim 27 (Canceled)

28. (Previously Presented) The process of claim 26, wherein the buffer layer has an in-plane texture of not greater than 20 degrees.

29. (Previously Presented) The process of claim 28, wherein the buffer layer has an in-plane texture of not greater than 15 degrees.

30. (Previously Presented) The process of claim 29, wherein the buffer layer has an in-plane texture of not greater than 14 degrees.

Claim 31 (Canceled)

32. (Previously Presented) The process of claim 26, wherein the coating material is generated by vaporizing a material source in the deposition chamber, vaporization being carried out by energizing an energy source.

33. (Previously Presented) The process of claim 32, wherein the energy source is selected from the group consisting of electron beam energy, ion beam energy, and magnetron energy.

34. (Previously Presented) The process of claim 26, wherein the substrate is translated through the deposition chamber by a reel-to-reel system.

35. (Previously Presented) The process of claim 26, further comprising passing a coolant through the coolant channel.

36. (Previously Presented) The process of claim 26, wherein the substrate block and the substrate are in a heat transfer relationship, the substrate block being maintained at a temperature below 50°C.

37. (Previously Presented) The process of claim 26, wherein the gas comprises at least one species from the group consisting of oxygen, nitrogen, argon, and helium.

38. (Previously Presented) The process of claim 37, wherein the gas comprises oxygen.

39. (Previously Presented) The process of claim 26, wherein the gas channels terminate at nozzles, and wherein the gas is flowed through the nozzles such that the gas flows onto a backside of the substrate.

40. (Previously Presented) The process of claim 26, wherein the tape is translated through the deposition chamber at a speed within a range of about 0.4 to 300 meters/hour.

41. (Previously Presented) The process of claim 26, wherein the coating material is selected from the group consisting of MgO and YSZ.

42. (Previously Presented) The process of claim 26, wherein the substrate block has a curved contour along which the substrate translates.

43. (Previously Presented) The process of claim 42, wherein the curved contour has a negative curvature.

44. (Previously Presented) The process of claim 26, wherein the coating material is deposited with the assist of an ion beam.

45. (Previously Presented) The process of claim 26, wherein the substrate block has multiple rows of gas channels.

46. (Previously Presented) The process of claim 26, wherein the substrate comprises a nickel alloy.

47. (Previously Presented) The process of claim 26, wherein the plurality of gas channels includes a first gas channel and a second gas channel and the coolant channel is located between the first gas channel and the second gas channel.

48. (Currently Amended) A process for continuous deposition of a coating of an HTS tape, comprising:

loading a substrate into a deposition chamber;

translating the substrate through the deposition chamber along a substrate block, the substrate block having a gas inlet for feeding gas into a manifold, the manifold distributing gas flow to a plurality of gas channels extending through the substrate block along a portion thereof, the gas channels

having a length, being hollow and open along an entirety of said length, extending to the first surface of the substrate block, and terminating at the first surface at positions spaced apart from each other along the first surface, the substrate block further having an internal coolant channel~~, the gas channels being open and unfilled~~;

depositing a coating material on the substrate as the substrate translates along the substrate block to thereby form the coating, the coating being a buffer layer over which an HTS layer is formed, the buffer layer having a biaxial texture; and

injecting gas through the gas channels of the substrate block and onto the substrate during depositing to reduce an average texture of the buffer layer.

49. (New) The process of claim 26, wherein the inner diameter is between about 0.05 inches and about 0.25 inches.

50. (New) The process of claim 26, wherein the inner diameter is between about 0.075 inches and about 0.175 inches.